The Process of Risk Management

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Glossary of Risk Terms

Accident – an unplanned incident which results in injury to person or damage to property

Incident – an unintended event that differs from normal or planned operations

Claim – a demand made by a person injured or damaged in an accident

Exposure – a item, circumstance, or operation which might lead to a loss

Hazard – a condition that may lead to an incident, or make a loss more likely

Peril – an event that causes a loss

Loss – a reduction in value

Frequency – the number of times an incident can or does occur

Severity – the measure of an impact of a loss (usually monetary)

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Classes of Risk

Economic – risks arising from financial based circumstances

Legal – risks arising out of law, civil actions or regulation

Political – risks associated with changes within government

Social – risks related to meeting the expectations of the general public

Physical – risks to your property and human resources

Juridical – risk associated with the decisions of judges or juries.

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Hierarchy of Objectives for Governmental Entities

1. Survival
2. Service Provision
3. Stability
4. Growth

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Pure Risk

Risk =
Anything that could harm, prevent, delay *or enhance* your ability to achieve your objectives

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What is Risk?

Negligence
- Auto Accidents
- Park Equipment
- Health
- Facilities
- Hiring

Regulations
- ADA
- FMLA
- FLSA
- OSHA
- Medicare

Disasters
- Earthquake
- Wild Fire
- Drought
- Wind
- Subsidence
- Dinosaurs Return

Hostile Intentions
- Terrorism
- Vandalism
- Domestic Violence
- Gang Activities

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Why We Need to Manage Risk

The purpose of managing risk is to increase the likelihood of an organization achieving its objectives by being in a position to manage threats and adverse situations and being ready to take advantage of opportunities that may arise.

National Guidance
on Implementing ISO 31000:2009
From NSAI in Ireland

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Objectives of Risk Management

Pre-Loss

- Efficiency
- Compliance
- Priorities set
- Minimum variance from planned activities

Post-Loss

- Continuation of operations
- Return to efficiency
- Stability or growth
- Minimize financial impact
- Protect public image

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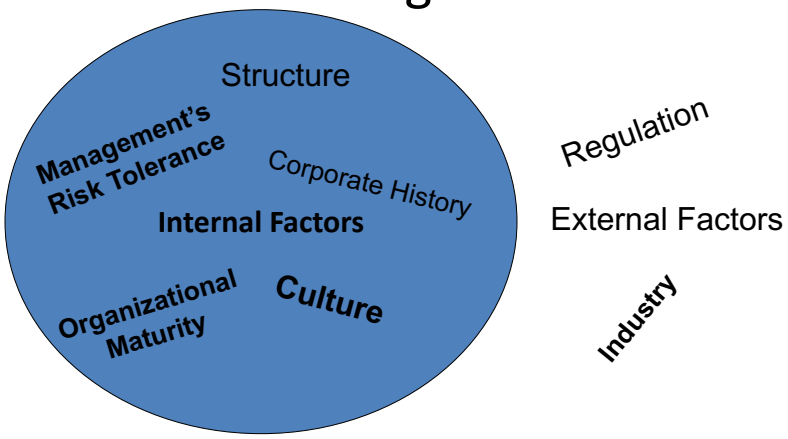
Risk Management



Risk Mgmt Strategies are determined by both internal & external factors
Risk Tolerance or **Appetite**: The level of risk that management is comfortable with

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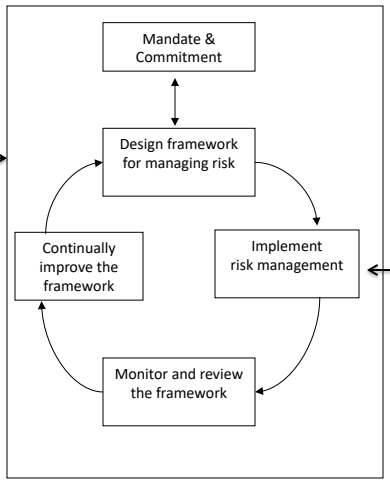
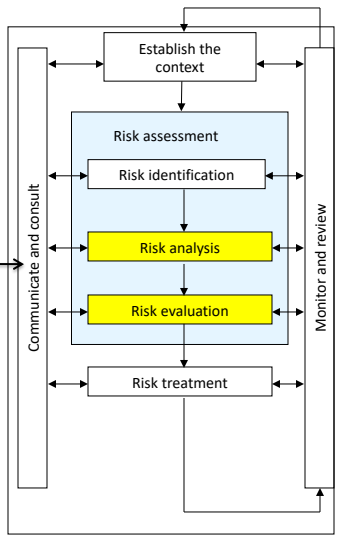
Principles

- Creates value
- Integral part of organizational processes
- Part of decision making
- Explicitly addresses uncertainty
- Systematic, structured & timely
- Based on best available info
- Tailored
- Takes human & cultural factors into account
- Transparent & inclusive
- Dynamic, iterative & responsive to change
- Facilitates continual improvement & enhancement of the org





From ANSI/ASSE/ISO 31000

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Risk Management Job Description!!!!

- Identify risks to the organization
- Analyze and measure exposures to risk
- Develop and implement risk management policies and procedures
- Communicate risk management efforts to management and staff
- Develop risk financing plan
- Coordinate or confirm regulatory compliance
- Develop allocation of cost of risk
- Monitor and update risk management program

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Others important to managing risk (Risk Management Team)

- Board or council
- Clerk/Auditor
- Legal department
- Human Resource department
- Safety personnel
- Supervisors
- Staff

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Organization Wide Risk Team

1. Assemble a team with upper level individuals representing:
   - Operations, finance, engineering, internal services, HR, legal, internal audit, risk
2. Designate a team leader:
   - Should have full support of top executive (Mayor)
   - Assumes the role of organizer and "pusher"
   - May naturally be the chief risk officer.
3. Team should develop norms such as scheduling, agendas, roles.
4. Create a team charter.

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Define Context

1. Define the objectives, resources and power of the team.
2. Set long and short term goals.
3. Limit scope by identifying organizational values, goals, objectives, & must-do functions.
4. Set priorities (operational needs, and established goals may make this step easy.)

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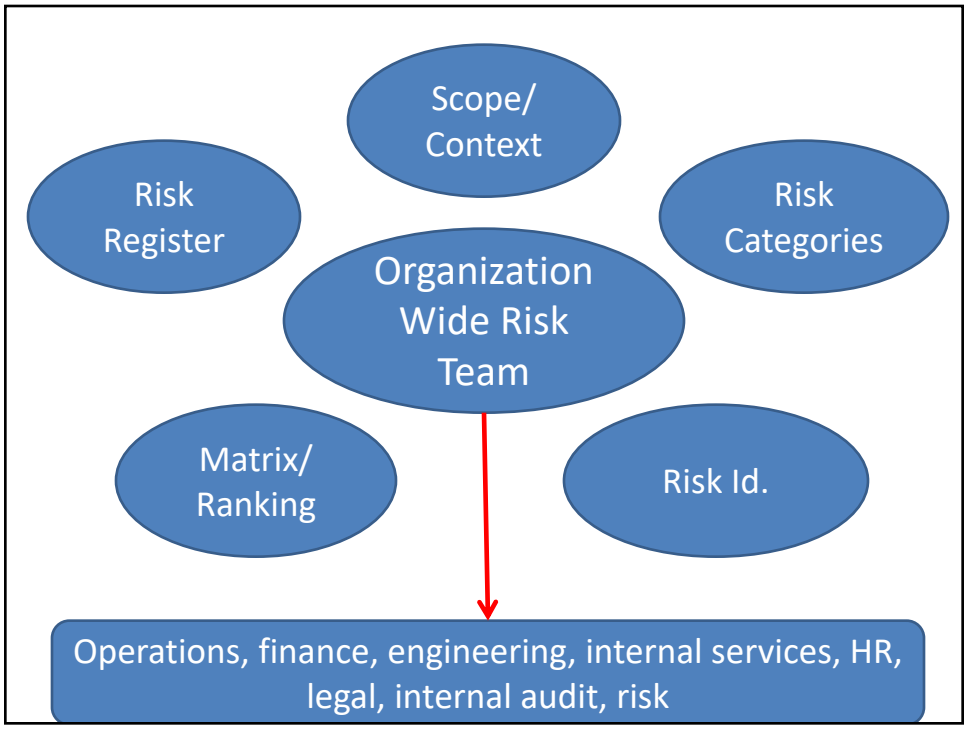
Scope/
Context
Risk
Register
Risk
Categories
Organization
Wide Risk
Team
Matrix/
Ranking
Risk Id.
Operations, finance, engineering, internal services, HR, legal, internal audit, risk

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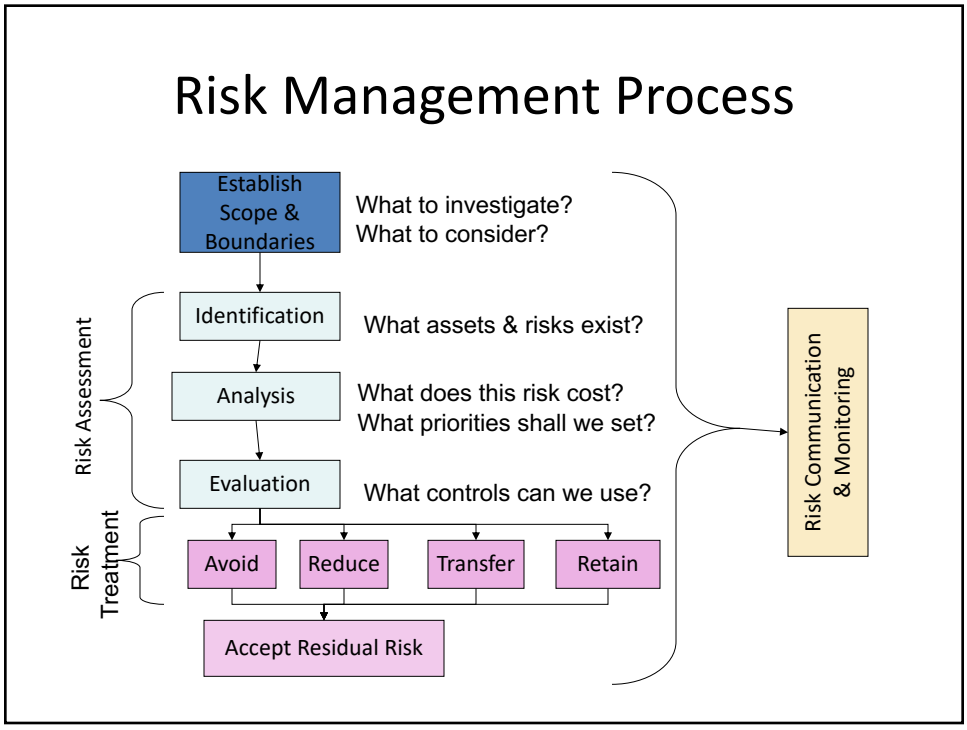
Risk Management Process
Establish Scope & Boundaries
What to investigate?
What to consider?
Identification
What assets & risks exist?
Analysis
What does this risk cost?
What priorities shall we set?
Evaluation
What controls can we use?
Risk Assessment
Risk Treatment
Avoid
Reduce
Transfer
Retain
Accept Residual Risk
Risk Communication & Monitoring

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Analysis

Qualitative – Importance of the risk

- Will it disrupt operations?
- Will it negatively impact your public image?

Quantitative – Value or frequency of the risk

- How much will a loss cost?
- How often can you expect the loss to occur?

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Qualitative Areas to Assess

- Organization's appetite for risk
- Effect on customer service
- Contractual obligations
- Employee safety
- Regulatory and legal compliance
- Public image

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Quantitative Analysis

The main area of Quantitative analysis is in the form of forecasting losses. The best way to forecast losses is through analysis of historical losses.

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Loss Data Analysis

Most analysis on loss data is conducted in two main areas:

Frequency – How often do losses occur?

Severity – How much do losses cost?

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Build a Risk Assessment Matrix

1. Decide on how you are going to assess each risk.
   - Probability of occurrence
   - Timing of occurrence
   - Impact (loss of ability to meet goals and objectives, could also be cost to organization)
2. Develop a risk scale that is:
   - Universal to all risks in the category
   - Scalable to the department and division levels.
   - See sample on hand-out.

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Why Do It?
Risk Maps Guide Risk Mitigation Efforts

Impact				
	Significant	Considerable management required	Must manage and Monitor risks	Extensive management essential
	Moderate	Risks may be worth accepting with monitoring	Management effort worthwhile	Management effort required
	Minor	Accept risks	Accept, but monitor risks	Manage and monitor risks
		Low/Remote	Moderate	High/Certain
		Likelihood		

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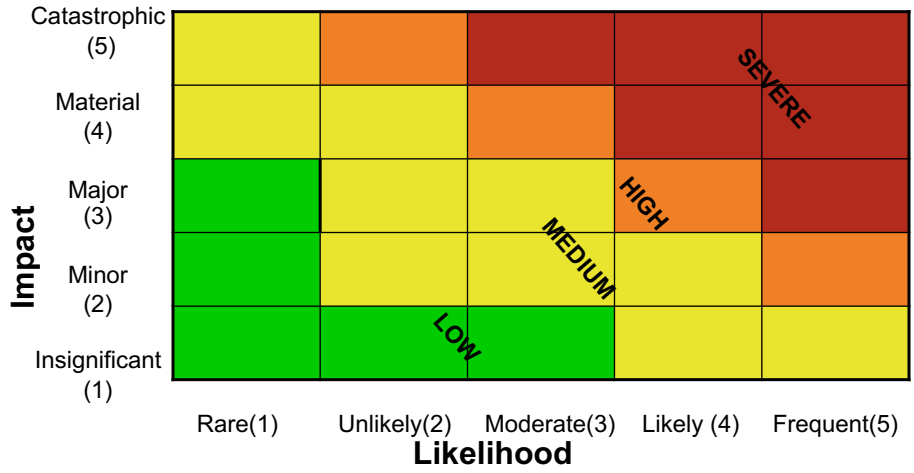
Risk Impact Matrix



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Establish a Risk Register

1. Develop a register or table of risks that:
   - Is grouped by the selected risk categories,
   - Allows for at-a-glance understanding of a risk's position in the scale or prioritization of risks.
   - The risk register should be a living document that changes as new risks emerge and old risks are mitigated.
2. The risk register becomes the measuring stick used by leadership (electeds) for setting risk management priorities.

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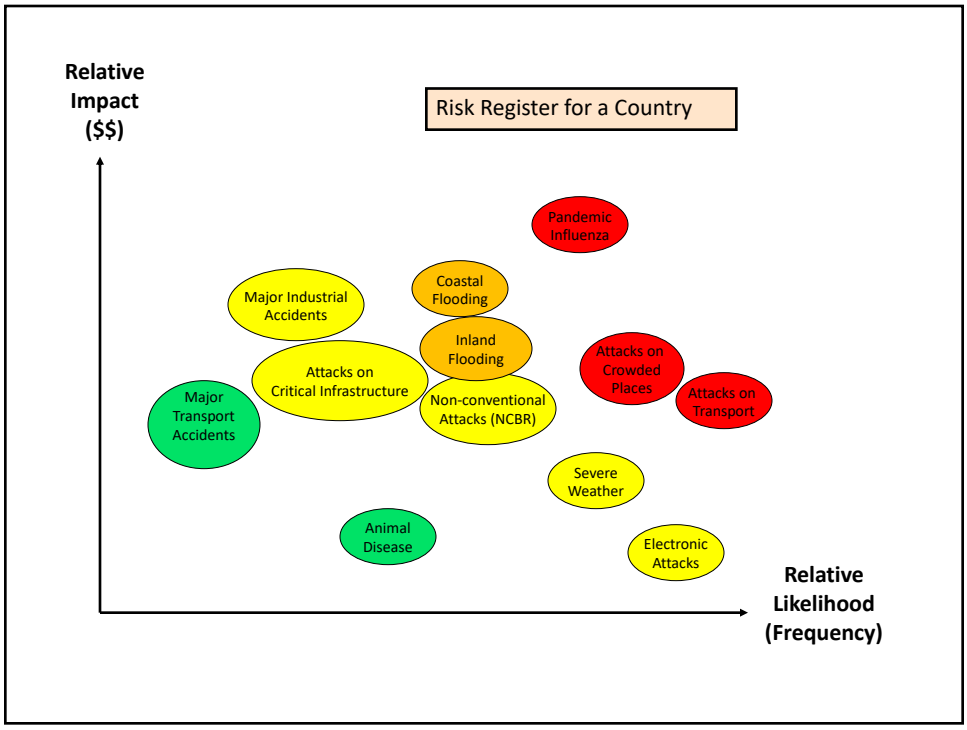

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Evaluation and Treatment

- What Risk Control measures are available and appropriate (feasible) for identified risks
- What will it cost?
- How to apply risk control efforts

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Two major classes of Risk Control

Risk prevention – aimed at reducing the frequency of loss.

Risk reduction – aimed at reducing the severity of loss.

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Five Primary Risk Control Techniques

- Risk Avoidance
- Loss Prevention
- Loss Reduction
- Segregation/Separation/Duplication of Exposures
- Typically a combination of two or more methods are utilized to deal with a specific risk.

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Risk Avoidance

Eliminating an exposure or activity, thus eliminating the possibility of loss.

- No additional risk control necessary.
- Often difficult to sell to management.
  - May conflict with organizational goals or mission.
  - Loss of revenue may make avoidance unacceptable.
  - Avoidance may create public image issues.
  - Activity may be mandated by law or regulation

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Loss Prevention

Actions aimed at reducing the frequency of claims that cannot be eliminated by avoidance.

- Focus is on the chain of events that lead to a loss, and disrupting the chain of events.

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Loss Reduction

Actions aimed at reducing the severity of losses that do occur.

- Can be accomplished both pre-loss and post-loss.

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Segregation/Separation/Duplication of Exposures (SSD)

Limiting the concentration of exposures or creating back up resources to limit the severity of loss

- **Segregation** – separates high risk or high value exposures from other exposures and operations.
- **Separation** – spreads property values and operations over several locations, to reduce the potential loss at any single location.
- **Duplication** – Maintaining back up of resources required to continue operations to limit loss arising from shut down.

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6 Primary Loss Prevention Techniques

1. **Hazard Elimination** – Removing an unsafe condition, substance or procedure from the process, which will reduce the likelihood of an accident occurring.
2. **Hazard Reduction** – Substituting a less hazardous condition, substance or procedure that will reduce the likelihood of an accident occurring.
3. **Engineering Controls** – Use of guards, dual switches and automation to reduce the likelihood of accidents occurring.
4. **Administrative Controls** – Implementing changes to procedures, rules or regulations to reduce the likelihood of accident occurring.
5. **Personal Protective Equipment** – Providing special safety clothing and equipment to employees to limit the likelihood of an injury to the employee.
6. **Training** – Reducing the potential for unsafe acts through training of proper procedures to reduce the likelihood of an accident occurring.

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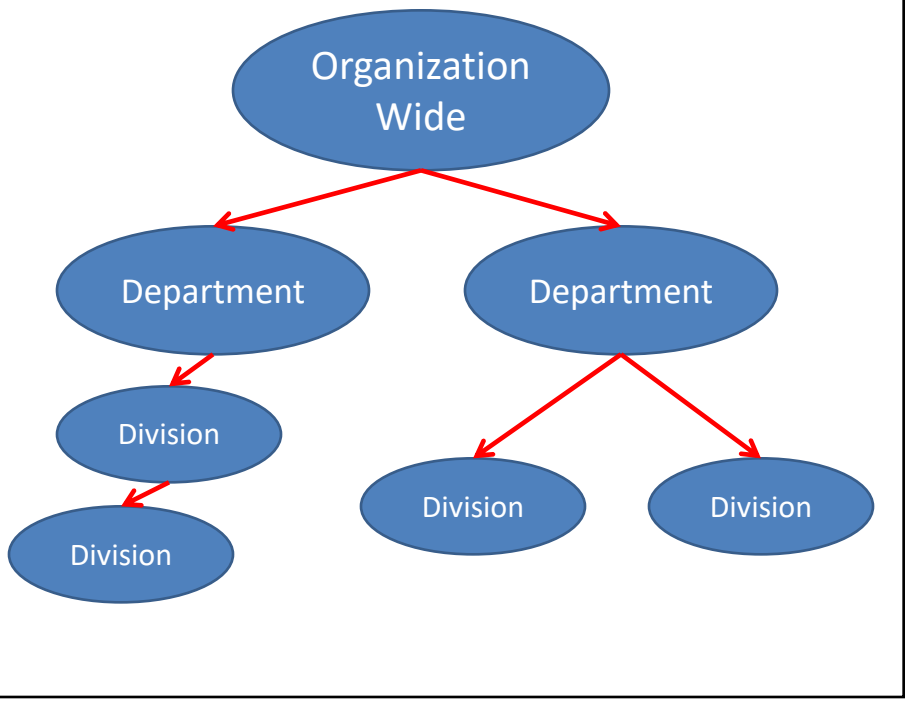

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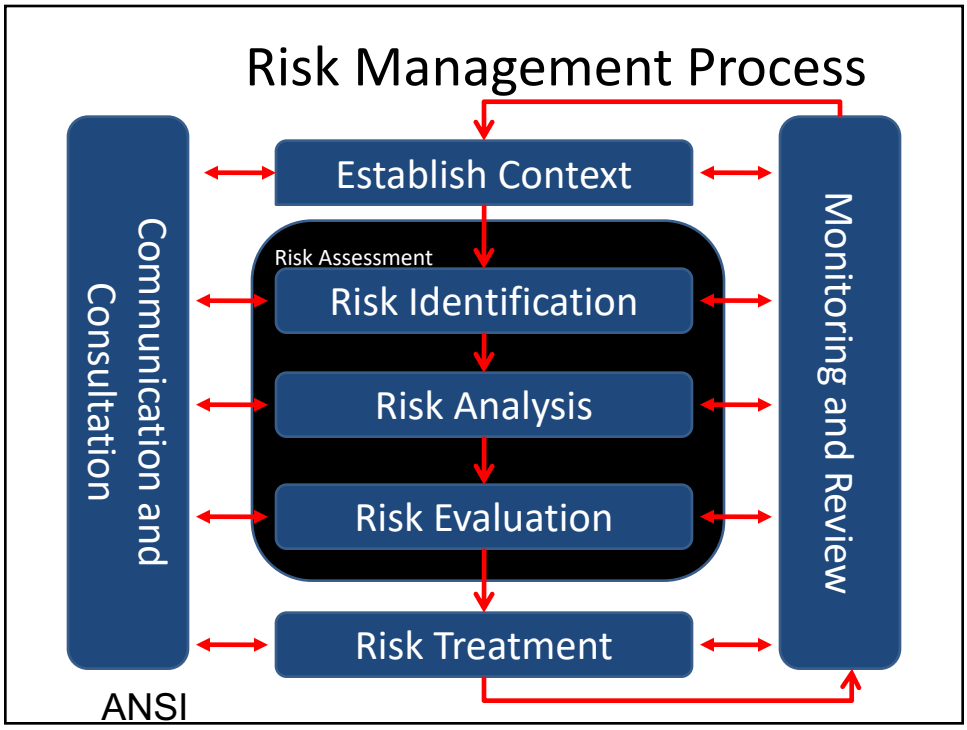
Risk Management Process
Establish Context
Risk Assessment
Risk Identification
Risk Analysis
Risk Evaluation
Risk Treatment
Communication and Consultation
Monitoring and Review
ANSI

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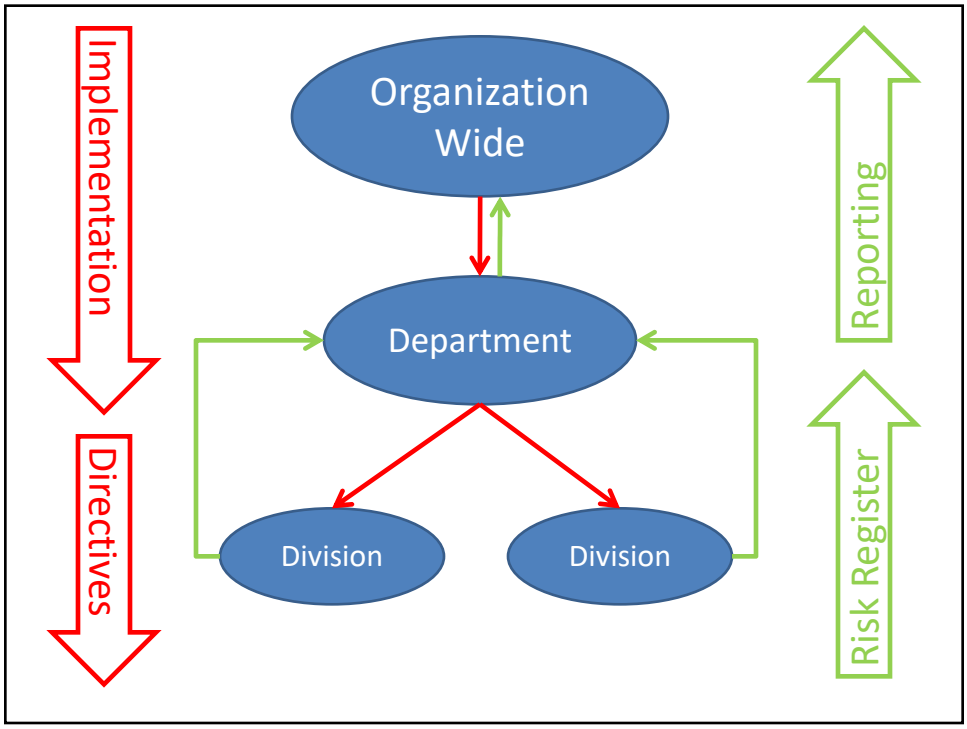
Implementation
Directives
Organization Wide
Department
Division
Division
Reporting
Risk Register

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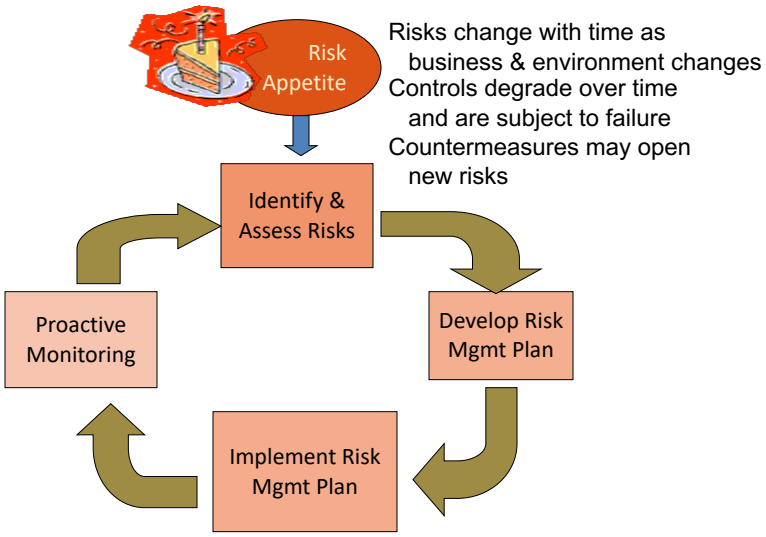
Continuous Risk Mgmt Process



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Managing Risk

Job Hazard Analysis
Risk Assessments
Daily Task Planning

Bryan Olsen, WCF of Utah

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Job Hazard Analysis (JHA)

- "A process that involves studying and recording each step of a job, identifying existing or potential job hazards and determining the best way to perform the job to reduce or eliminate hazards (OSHA)."
- It is a comprehensive survey for more complex tasks. JHA's should be retained, preferably electronically.
- They should be a key part of employee safety training

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Risk Assessment

- Like a Job Hazard Analysis, they are a process used to identify and prioritize risks (likelihood and severity).
- They work best for repetitive, simpler tasks. They should be a key part of employee safety training and should be retained, preferably electronically.
- Many companies require the completion of a Risk Assessment for all operations. Risk Assessments are also required by law (OSHA) in many areas such as providing employees with proper personal protective equipment and in process safety management.

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Daily Task Planning

- A process at the beginning of each shift or non-routine task
  - Review the tasks to be preformed
  - Review the hazards associated with the tasks
  - Review what needs to be done to eliminate or manage the hazards

  They should be required for all employees, including those who work alone and without supervision.

  They should be treated as a safety meeting-documented and signed/initialed by all attendees.

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Hazard Evaluation

- Employees need to be trained to recognize hazardous situations. They should also understand the basics of assessing risk.
- Risk involves an evaluation of the likelihood (probability) of an accident and how serious an accident might be (severity).
- Two tools commonly used in assessing risk are Risk Parameters and a Risk Assessment Matrix.

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Hazard Evaluation- Setting Parameters

- Sample company risk parameters for a hazard

Likelihood/Probability	Severity
Almost Certain (4)	Major Event (4)
Could Happen (3)	Severe (3)
Unlikely (2)	Moderate (2)
Extremely Unlikely (1)	Minimal (1)

- Note:
  - "Severe" is a likely disabling injury
  - "Major Event"- fatality or several disabling injury

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Using a Risk Assessment Matrix

Risk Assessment Matrix				
Probability	Severity			
	Minimal (1)	Moderate (2)	Severe (3)	Major Event (4)
Almost Certain (4)	B	B	A	A
Could Happen (3)	C	B	A	A
Unlikely (2)	C	C	B	B
Extremely Unlikely (1)	C	C	C	B

- Class C Hazard: Continue with task after completion of required actions.
- Class B Hazard: Stop! Inform supervisor. Develop and implement controls.
- Class A Hazard: Stop! Inform supervisor. Complete a Job Hazard Analysis.

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Using a Risk Assessment Matrix

Risk Assessment Matrix				
Probability	Severity			
	Minimal (1)	Moderate (2)	Severe (3)	Major Event (4)
Almost Certain (4)	B	B	A	A
Could Happen (3)	C	B	A	A
Unlikely (2)	C	C	B	B
Extremely Unlikely (1)	C	C	C	B

- Class C Hazard: Continue with task after completion of required actions.
- Class B Hazard: Stop! Inform supervisor. Develop and implement controls.
- Class A Hazard: Stop! Inform supervisor. Complete a Job Hazard Analysis.

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Why use Parameters and Matrices

- There are two principle purposes of a Hazard Evaluation Program. First, companies can develop this program to ensure that managers, supervisors, **and employees** are able to recognize and evaluate hazards in the workplace. Second, as hazards are identified and evaluated, sound safety controls can be implemented to reduce or eliminate these hazards; Class A hazards reduced to B or C Hazards and Class B hazards reduced to Class C.

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Completing a Job Hazard Analysis

- Select and define the job
- Break the job down into Step/Hazards
  - Slip/fall while carrying forms to the truck
- Develop recommended safe procedures
  - Controls needed, Who is responsible & When
- Residual concerns
- Goals – frequency or severity reduction
  - Get the Hazard to a Class C Hazard

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Job Hazard Analysis

Operation	Evaluate the risk associated with placing footing forms for Smith residence basement		
Date:	7/1/2011	Supervisor:	Chester Bunkle
Participants:	Joe (Safety), Rich (Crew), John (Crew lead), Nate (Operations)		

Step/Hazard	Probability Rating	Severity Rating	Risk Rating	Required Additional Controls	Who	When	Residual Concern/Goals
Strain caused by unloading forms	3	3	A	Require 2 persons to remove forms from truck. Additional training. Get pricing on hydraulics in new truck purchase. Price forklift for job.	Safety & Crew Leads, Purchasing	10/2011, 1/2012	Shortcuts, time constraints, economic. Reduce probability to Unlikely and Risk Rating to C.
Slip/fall or foot crushing from forms	3	3	A	Require proper footwear. Use designated and clear routes on job. Require 2 persons for a larger forms. Additional training. Price forklift for future larger jobs.	Safety & Crew Leads, Purchasing	10/2011, 1/2012	Shortcuts, time constraints, economic. Reduce probability to Unlikely, severity to Moderate and Risk Rating to C.
Crushing injury to extremities while placing forms	3	2	B	Require proper footwear and gloves. Additional training, especially for new hires.	Safety & Crew Leads, Purchasing	10/2011	Shortcuts, time constraints, economic. Reduce probability to Unlikely and Risk Rating to C.
Falls from forms while pouring concrete	3	3	A	Require form scaffolds be dispatched to and used on all jobs that have footings higher than 4 feet. No exceptions!	Operations, Safety & Crew leads.	10/2011	Corporate safety to spot check jobs. Communicate with crew leads that this is a zero tolerance safety rule. Reduce severity to minimal and Risk Rating to C.

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Completing a Risk Assessment

- Select and define the job
  - Repetitive, simpler jobs than JHA (Using a Ladder)
- What could go wrong? Identify the hazards.
- Initial Assessment- Parameters and Matrix
- Action Taken to Eliminate or Manage Hazards
  - Training, PPE, work practice controls
- Assessment after Action Taken
- Additional action needed before completing the task?

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Risk Assessment

1. **Work Activity**: Assess the risk associated with Maintenance employees changing fluorescent light bulbs in the office.
2. **Potential Hazards**: Falls from ladder, strain while carrying ladder, dropping bulbs/covers
3. **Initial Assessment**: Could Happen, Severe (Fall from ladder)- Class A Risk
4. **Action Taken to Eliminate or Manage Hazards**: Select the proper ladder (size, capacity, fiberglass), employee training in ladder usage and strain/sprain prevention, PPE- safety glasses with gloves optional, don't conduct the work when office employees are present.
5. **Complete the Risk Assessment Matrix**: Unlikely, Moderate- Class C Risk
6. **List additional actions taken/needed before task can be done safely**: None.

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Completing a Daily Task Plan

- Define the day's work activities
- Does it need to be done?
  - Unusually high risk? Is the job essential?
- What hazards are present?
  - Use JHA's and Risk Assessments
  - Use employee knowledge
- Review recommended safe job procedures
- Do I need additional help or equipment?

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Daily Task Plan

Daily Task Plan **Date: Sept. 3, 2011**

1. What is the work activity? Baking pizzas in the kitchen
1. Does it need to be done? Yes
2. What are the potential hazards? Burns, slip/falls, cuts
3. How likely is an accident to happen? How severe? Could Happen, Moderate.
4. What are good safety controls? Oven mitts, clean up spills, store/wash pizza cutters separately.
5. Do I need additional help or equipment? No

Likelihood/Probability	Severity
Almost Certain	Major Event
Could Happen	Severe
Unlikely	Moderate
Extremely Unlikely	Minimal

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